

**REMARKS**

Claims 1-4, 7, 11-13, 15-20, 22-24, 26, 28-34, 36-39 and 41-55 are all the claims pending in the application.

As discussed in the Amendment filed March 30, 2007, the present application teaches that spa covers generally include a core material and an outer cover material formed around the core material. However, typical spa covers do not prevent moisture from entering the spa cover core material. Since the covers do not stop moisture (in the form of water vapor), the water is absorbed by the core material, which acts as a sponge. The spa cover eventually becomes excessively heavy and needs to be replaced. *See* paragraphs [03] and [09]-[12]. The present application provides an improved cover material to prevent water vapor from being absorbed by the core, as recited in the claimed invention.

Applicants are submitting herewith selected pages from the website [http://www.hot-tub-spa-covers.com/insulating\\_spa\\_covers.htm](http://www.hot-tub-spa-covers.com/insulating_spa_covers.htm) which discuss the vapor barrier for a spa cover. Particularly, these pages discuss the problem of a vapor barrier becoming porous, which then allows steam and water to penetrate into the foam insulating cores. ("A full 85% of all spa covers are replaced due to weight gain for absorption of water. While the demise of a spa cover is inevitable, how the foam is sealed is the most important aspect of extending the life of your cover." [http://www.hot-tub-spa-covers.com/insulating\\_spa\\_covers.htm](http://www.hot-tub-spa-covers.com/insulating_spa_covers.htm) on May 10, 2007, clicking on the "3 Most Important Questions a Consumer Needs to Ask"). The pages also assert that science may one day develop a better vapor barrier. Thus, this supports Applicants' arguments of March 30, 2007 regarding the problems in the art and the inventiveness of the

SUPPLEMENTAL RESPONSE UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 10/820,789  
Atty. Docket No. A8723

solution of the superior water vapor barrier presented by the present application. Accordingly, Applicants respectfully request that the Examiner allow the application at least for the reasons presented in the March 30 Amendment as supported by this Supplemental Amendment.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

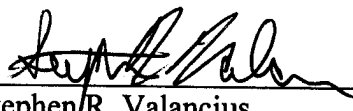
Respectfully submitted,

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

  
Stephen/R. Valancius  
Registration No. 57,574

Date: May 15, 2007

# The 3 Most Important Questions to Ask when Buying a Spa Cover

There are many different brands and qualities of covers available for your spa. Some are very well made, and some are just very well marketed. The following three questions are the most important to ask when considering purchasing a new spa cover.

## 1. What is the true density of the foam?

The foam cores of a spa cover are the absolute, #1, most important (and most expensive) aspect! The density of the foam determines not only the insulating value, but more importantly, how strong the cover will be. Expanded polystyrene (the foam cores) comes in many densities, with between 1# pound and 2# pound being the most common for spa covers. 1.5# density foam is 50% stronger than 1# foam. Some manufacturers may round up numbers, or use "nominal" measurements. In this way, they may call a 1¼ pound density foam 1½#.

## 2. What is the true thickness of the foam/cover?

Here again is a place where "nominal" measurements can come into play. Some covers that are 3¾" thick are being called 4". Even covers as thin as 3½" have been seen to claim 4". Additionally, is the stated thickness just the foam or does it also include vinyl? Depending on where a measurement is taken, due to seams and layers of vinyl, the vinyl can add up to ½" of thickness to the cover, yet no strength and very little insulation value.

**Extreme Spa Covers uses only full and true measurement in their specifications. When we describe the thickness of our covers we're actually describing the true thickness of the foam. This doesn't include any vinyl, or exaggerations.**

## 3. How thick is the inner polyethylene that protects the foam from water absorption and how is it sealed?

A full 85% of all spa covers are replaced due to weight gain from absorption of water. While the demise of a spa cover is inevitable, how the foam is sealed is the most important aspect of extending the life of your cover.

### \*NOMINAL -

According to Merriam-Webster Online, "of, being, or relating to a designated or theoretical size that may vary from the actual". The most common example of this would be that ever common building material, the 2 x 4. A "2 x 4" hasn't been a true 2" by 4" since around the 1940's.

calculated at. Our covers are R-14 @ 40°.

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## Vapor Barrier

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One of the many important features of an insulating cover is the vapor barrier surrounding the foam. The barrier used in our covers is a **6 mil.** single-extruded, virgin bead, polyethylene sheeting. This **extra thick** sheeting is heat sealed around the foam core. As an added feature the sheeting is vacuumed of air during the sealing process. This prevents the cover from "bloating" from any trapped air expanding, when the sun beats down on it. Many cheaper cover manufacturers tape the poly sheeting closed to save costs, but eventually the tape fails and the cover will start absorbing water, getting heavier and heavier.

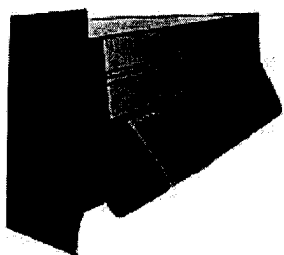
One of the options offered on these covers is to double wrap the foam core with a second layer of polyethylene sheeting. This is something no other manufacturer offers and we highly recommend it due to the following.

Covers have a small hole on the bottom side of the vinyl covering to allow any accumulated water and condensation to drain out. As much as this is an absolute necessity, it also allows evaporating chemicals to rise up into the covers interior (needless to say covers with an open mesh bottom are the worst). Over a long period of time these chemicals can start deteriorating the vapor barrier to a point where it becomes porous. The porosity then allows steam and evaporating water to penetrate into the foam insulating cores. One day science will probably develop a better vapor barrier (although those wanting to sell lots of covers may not use it), but until then doubling up the polyethylene sheeting will extend the life of your cover.

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## Continuous Hinge Seal

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These covers come standard with a continuous insulated "hinge seal" to prevent heat from escaping from an area most people don't even think about. Most other covers have what are called "fingers" or "steam sealers" (below). These are two pads that are placed on the underside of the cover, at the ends, between the two halves to prevent steam and heat from escaping when the cover is installed on your spa. If you turn one of these covers upside-down you'll actually see that they also push the two insulating halves apart (below), leaving as large as a one inch gap between the two halves. **This is equal to having a hole the size of a basket ball in your cover, your INSULATING cover!**